

09/402, 208

(FILE 'HOME' ENTERED AT 16:49:17 ON 18 APR 2003)

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 16:49:28 ON 18 APR 2003

L1 5794 S (FETUIN?)  
L2 8206 S (FETAL) (2A) (PROTEIN?)  
L3 85 S L1 AND (CO OR COBALT)  
L4 5 S L3 AND (ZN OR ZINC)  
L5 5 DUP REM L4 (0 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 16:52:05 ON 18 APR 2003

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 16:53:33 ON 18 APR 2003

L6 116 S L1 AND METAL?  
L7 25 S L1 (20A) METAL?  
L8 18 DUP REM L7 (7 DUPLICATES REMOVED)  
L9 1 S L7 AND (BARIUM OR BA)  
L10 3 S L7 AND (ZINC OR ZN)  
L11 3 DUP REM L10 (0 DUPLICATES REMOVED)

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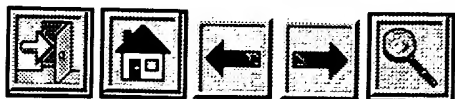
L20 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3  
 AN 1992:3964 CAPLUS  
 DN 116:3964  
 TI **Fetuin** and alpha-2HS glycoprotein induce alkaline phosphatase in  
 epiphyseal growth plate chondrocytes  
 AU Ishikawa, Yoshinori; Wu, Licia N. Y.; Valhmu, Wilmot B.; Wuthier, Roy E.  
 CS Dep. Chem., Univ. South Carolina, Columbia, SC, 29208, USA  
 SO Journal of Cellular Physiology (1991), 149(2), 222-34  
 CODEN: JCLLAX; ISSN: 0021-9541  
 DT Journal  
 LA English  
 AB A previously described chondrocyte alk. phosphatase induction factor  
 (CAP-IF) for chicken epiphyseal growth plate chondrocytes has been  
 purified to SDS-PAGE homogeneity from fetal bovine serum by ammonium  
 sulfate pptn. and by dye-ligand affinity (Affi-Gel Blue and Reactive  
 Green-19 agarose) and hydroxyapatite column chromatogs. As detd. by  
 immunopptn. of [35S]methionine-labeled cellular proteins after 3-day  
 treatment, this highly purified CAP-IF increases the level of AP and  
 certain other membrane proteins 2- to 3-fold over control values. The  
 pure protein of apparent 64.5 kDa mol. wt. has been identified as  
**fetuin** by N-terminal amino acid sequencing. This was confirmed by  
 the finding that high alk. phosphatase (AP)-inducing activity is present  
 in **fetuin** prepd. by the Spiro method. However, **fetuins**  
 prepd. by the Pedersen or Deutsch procedures are inactive. At least half  
 of the CAP-IF activity of **fetuin** was irreversibly destroyed by  
 treatment with **EDTA**, and addn. of **Zn2+** did not  
 reactivate the **EDTA**-treated **fetuin**. Ascorbate  
 synergistically enhanced the effect of **fetuin** and chondrocyte AP  
 activity by over 8-fold during 3-day exposure. Because of the very high  
 homol. between **fetuin** and the A-chain of .alpha.2-HS  
 glycoprotein, it was also tested and found that .alpha.2HS glycoproteins  
 from human serum and bovine bone are both strong AP inducers. These  
 findings suggest that the AP-inducing activity resides in a labile,  
 cystatin/**Zn2+**-binding domain common to these related serum  
 glycoproteins. These proteins appear to play a role in enhancing AP  
 expression in normal growth plate cartilage differentiation.

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L20 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4  
 AN 1984:170277 CAPLUS  
 DN 100:170277  
 TI Identification of "embryonin" as bovine .alpha.2-macroglobulin  
 AU Feldman, Steven R.; Gonias, Steven L.; Ney, Kathryn A.; Pratt, Charlotte  
 W.; Pizzo, Salvatore V.  
 CS Med. Cent., Duke Univ., Durham, NC, 27710, USA  
 SO Journal of Biological Chemistry (1984), 259(7), 4458-62  
 CODEN: JBCHA3; ISSN: 0021-9258  
 DT Journal  
 LA English  
 AB Pedersen **fetuin** contains a contaminant, embryonin, that exhibits  
 immuno cross-reactivity with human .alpha.2-macroglobulin (.alpha.2Mh).  
 This protein coelutes with .alpha.2Mh in gel filtration chromatog. and can  
 be purified to homogeneity by **Zn<sup>2+</sup> chelate** chromatog.  
 By SDS-polyacrylamide gel electrophoresis (SDS-PAGE), this contaminant  
 exhibited similar subunit size, protease-induced cleavage fragments, and  
 heat fragmentation as .alpha.2Mh. [125I]trypsin and [125I]chymotrypsin  
 each bound at a ratio of 0.9 mol/mol to this **fetuin**-derived  
 native .alpha.2M (.alpha.2Mf) and at a ratio of <0.2 mol/mol to  
 methylamine-treated .alpha.2Mf. As detd. by SDS-PAGE, 1:1 molar ratio of  
 protease/.alpha.2Mf cleaved each .alpha.2Mf subunit to fragments of  
 .apprx.72,000 daltons. At a 0.2:1 molar ratio of trypsin/.alpha.2Mf-  
 methylamine, every .alpha.2Mf-methylamine subunit was cleaved to  
 polypeptide chains of .apprx.72,000 and 110,000 daltons. In native PAGE,  
 .alpha.2Mf and .alpha.2Mf-methylamine migrated with the same mobility;  
 after reaction with trypsin, their mobilities increased similarly.  
 [125I].alpha.2Mf cleared from the circulation of mice with a half-time  
 (t<sub>1/2</sub>) of 30 min. The trypsin or methylamine deriv. of [125I].alpha.2Mf  
 cleared with t<sub>1/2</sub> of <5 min and clearance was competable when the ligand  
 was coinjected with a large molar excess of unlabeled .alpha.2Mh-  
 methylamine. .alpha.2Mf, 0.3 nM, treated with trypsin or methylamine,  
 inhibited 50% of the binding of 0.1 nM [125I].alpha.2Mh-methylamine to  
 specific receptors on mouse peritoneal macrophages in vitro. Native  
 .alpha.2Mf did not inhibit significantly the binding of the ligand at this  
 concn. Bovine .alpha.2M was purified from plasma by Ni<sup>2+</sup> **chelate**  
 chromatog. By SDS-PAGE, amino acid anal., and CNBr peptide mapping, it  
 was indistinguishable from .alpha.2M purified from **fetuin**.  
 Thus, embryonin is bovine .alpha.2M.

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L5 ANSWER 5 OF 5 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
AN 1981:65547 BIOSIS  
DN BR21:543  
TI PARTIAL PURIFICATION AND PROPERTIES OF A CELL SURFACE N ACETYL GLUCOSAMINE  
BINDING PROTEIN FROM CALF LYMPHOCYTES.  
AU WOLFMAN A; BELL J E  
CS UNIV. ROCHESTER MED. CENT., ROCHESTER, N.Y. 14642.  
SO 65TH ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR  
EXPERIMENTAL BIOLOGY, ATLANTA, GA., USA, APRIL 12-17, 1981. FED PROC.  
(1981) 40 (3 PART 2), 813.  
CODEN: FEPRA7. ISSN: 0014-9446.  
DT Conference  
FS BR; OLD  
LA English



## Long View for STIC Online Catalog

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Biotechnology and Chemical Library Microfilm	QH301 .F4 Microfilm	v.40 no.1-14 1981 c.1	Available
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Biotechnology and Chemical Library Microfilm	QH301 .F4 Microfilm	v.46 no.1-8 1987 c.1	Available
Biotechnology and Chemical Library	QH301 .F4	v.10 no.1 1951 c.1	Available
Biotechnology and Chemical Library	QH301 .F4	v.11 1952 c.1	Available
Biotechnology and Chemical Library	QH301 .F4	v.12 1953 c.1	Available
Biotechnology and Chemical Library	QH301 .F4	v.13 1954 c.1	Available

L4 ANSWER 3 OF 3 MEDLINE  
AN 62107439 MEDLINE  
DN 62107439  
TI **Studies on fetuin, a glycoprotein of fetal serum. II. Nature of the carbohydrate units.**  
AU SPIRO R G  
SO J Biol Chem, (1962 Feb) 237 382-8.  
DT Journal  
LA English  
FS OLDMEDLINE  
EM 196212  
ED Entered STN: 19990716  
Last Updated on STN: 19990716  
ST carbohydrates - blood; fetus - blood; glycoproteins - blood  
RN 66455-27-4 (GLYCOPROTEINS)

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L5 5 DUP REM L4 (0 DUPLICATES REMOVED)

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L9 1 S L7 AND (BARIUM OR BA)  
L10 3 S L7 AND (ZINC OR ZN)  
L11 3 DUP REM L10 (0 DUPLICATES REMOVED)  
L12 0 S (METAL?) (3A) (DEPENDEN?) AND (L1 OR L2)  
L13 183 S L2 AND (ZINC OR ZN)  
L14 0 S L13 AND (CHELAT? OR EDTA)  
L15 46 S L2 AND (CHELAT? OR EDTA)  
L16 18 DUP REM L15 (28 DUPLICATES REMOVED)  
L17 0 S L16 AND (ZINC OR ZN?)  
L18 168 S L1 AND (CHELAT? OR EDTA OR ETHYLENEDIAMIN?)  
L19 28 S L18 AND (ZINC OR ZN?)  
L20 15 DUP REM L19 (13 DUPLICATES REMOVED)